Amendments to the Specification:

Please replace the paragraph beginning on page 2, line 26 and ending on page 3, line 22 with the following amended paragraph:

--FIGS. 20(a), 20(b), and 21 are front views showing the conventional infrared ray lamp described in Japanese Published Unexamined Patent Application, Publication No. Hei 11-54092, wherein the carbon-based substance is used as a heating element. ~~Part (a) of~~ FIG. 20(a) is a view showing the structure of the lead wire taking-out portion of the conventional infrared ray lamp in which a heating element 200 is sealed inside a glass tube 100. ~~Part (b) of~~ FIG. 20(b) is a partially magnified view showing the connection portion between the heating element 200 and the lead wire 104 of the infrared ray lamp shown in ~~the part (a) of~~ FIG. 20(a). FIG. 21 is a partially magnified view showing the connection portion between the two heating elements 200a and 200b and the lead wire 104 of the conventional infrared ray lamp in which the two heating elements 200a and 200b are sealed inside the glass tube. ~~The part (a) of~~ FIG. 20(a) shows the structure of one end of the infrared ray lamp, and the other end of the infrared ray lamp has similar structure. Furthermore, the structure of the infrared ray lamp shown in FIG. 21 is similar to that shown in ~~the part (a) of~~ FIG. 20(a), except for the connection portion between the two heating elements 200a and 200b and the lead wire 104 shown in the figure.--

Please replace the paragraph beginning on page 3, line 23 and ending on page 4, line 19 with the following amended paragraph:

--As shown in ~~the part (a) of~~ FIG. 20(a), in the conventional infrared ray lamp, a metal wire 102 wound in a coil shape is wound around the end of the heating element 200 formed of a carbon-based substance and formed into a rod shape. The end portion of the coil-shaped metal wire 102 is covered with a metal foil sleeve 103, and this metal foil sleeve 103 is secured to the end of the heating element 200 by crimping. The internal lead wire 104 formed of a metal wire and having a coil portion 105 wound in a coil-spring shape in the middle of the wire is electrically bonded to one end of the metal foil sleeve 103. One end of a molybdenum foil sheet 107 is spot-welded to the other end of the internal lead wire 104. Furthermore, an external lead wire 108 formed of a molybdenum wire is welded to the other end of the molybdenum foil sheet 107. The heating element 200, the metal foil sleeve 103, the internal lead wire 104, the molybdenum foil sheet 107 and the external lead wire 108 connected in series as described above are inserted into the glass tube 100 and disposed therein. An inert gas, such as argon, nitrogen or the like, is sealed inside the glass tube 100, the glass tube 100 is fused and bonded at the portion of the molybdenum foil sheet 107, thereby completing an infrared ray lamp.--

Please replace the paragraph beginning on page 5, line 15 and ending on page 6, line 10 with the following amended paragraph:

--In the conventional infrared ray lamp having the structure shown in ~~FIG. 20~~ FIGS. 20(a) and 20(b), for the lamp of large wattage of the infrared ray lamp, that is, for the lamp of a large power consumption, the coil-shaped metal wire 102 is heated to a high temperature. As a result, when the infrared ray lamp having this structure is used for a long time, the contact resistance of the connection portion among the heating element 200, the coil-shaped metal wire 102 and the metal foil sleeve 103 increases because of the temperature rise. The conventional infrared ray lamp therefore has the problem of abnormal heating at the connection portion. Furthermore, if the temperature at the connection portion between the coil-shaped metal wire 102 and the metal foil sleeve 103 rises continuously for a long time, the temperature at the bonding portion may rise high and, in the worst case, the bonding portion may fuse and break. Moreover, the stress caused by heat cycles due to the difference in thermal expansion coefficient between the heating element 200 and the coil-shaped metal wire 102 is added, and the contact resistance becomes higher than the value at the beginning of use, whereby the temperature rise at the connection portion is accelerated.--

Please replace the paragraph beginning on page 8, line 17 and ending on page 9, line 8 with the following amended paragraph:

--~~Part (a) of~~ FIG. 24(a) is a graph of the distribution curve 270 of the intensity of the infrared rays emitted from the heating element 240 of the infrared ray lamp shown in FIG. 23. ~~Part (b) of~~ FIG. 24(b) is a cross-sectional view showing the portion having the heating element 240 of the infrared ray lamp shown in FIG. 23. The x and y axes shown in ~~the parts (a) and (b) of FIG. 24~~ FIGS. 24(a) and 24(b) are orthogonal coordinate axes on a plane perpendicular to the axial direction of the heating element 240 shown in FIG. 23. In ~~the parts (a) and (b) of FIG. 24~~ FIGS. 24(a) and 24(b), the origin 0 corresponds to the center axis of the heating element 240. In the graph of ~~the part (a) of~~ FIG. 24(a), the values in the radial directions designate the emission intensity of the infrared rays, and the values in the circumferential directions designate angles with respect to the center axis on the plane perpendicular to the axial direction of the heating element 240. These angles are designated by angles from the positive direction of the x axis.--

Please replace the paragraph beginning on page 9, line 9 and ending on page 9, line 14 with the following amended paragraph:

--When a constant voltage was applied to the heating

element 240, the amount of the infrared rays reaching a minute area at a constant distance from the center axis (represented by the origin 0 of ~~FIG. 24~~FIGS. 24(a) and 24(b)) of the heating element 240 was measured, whereby the intensity distribution curve 270 was obtained.--

Please replace the paragraph beginning on page 9, line 15 and ending on page 9, line 21 with the following amended paragraph:

--As indicated by the intensity distribution curve 270 in ~~the part (a) of~~ FIG. 24(a), the infrared ray lamp 240 emits infrared rays in all directions at substantially similar intensity. This results from the fact that the cross-sectional shape of the heating element 240 is substantially symmetrical with respect to its axis and has a circular shape as shown in ~~the part (b) of~~ FIG. 24(b).--

Please replace the paragraph beginning on page 10, line 15 and ending on page 11, line 15 with the following amended paragraph:

--~~Part (a) of~~ FIG. 26(a) is a graph of the distribution curve 271 of the intensity of the infrared rays emitted from the infrared ray lamp having the infrared ray reflection plate 280. ~~Part (b) of~~ FIG. 26(b) is a cross-sectional view showing the portion having the heating element 240 of the infrared ray lamp having the infrared ray reflection plate 280 shown in FIG. 25. The x and y axes

shown in ~~the parts (a) and (b) of FIG. 26~~FIGS. 26(a) and 26(b) are orthogonal coordinate axes on a plane perpendicular to the axial direction of the heating element 240 shown in FIG. 25. The direction opposed to the reflection face of the infrared ray reflection plate 280 is defined as the negative direction of the x axis. In ~~the parts (a) and (b) of FIG. 26~~FIGS. 26(a) and 26(b), the origin 0 corresponds to the center axis of the heating element 240. In the graph of ~~the part (a) of~~ FIG. 26(a), the values in the radial directions represented the emission intensity of the infrared rays, and the values in the circumferential directions represented angles with respect to the center axis on the plane perpendicular to the axial direction of the heating element 240. These angles are designated by angles from the positive direction of the x axis. In ~~the part (a) of~~ FIG. 26(a), the concentric gradations indicating the emission intensity have the same values of the gradations shown in ~~the part (a) of the above-mentioned~~ FIG. 24(a). In addition, the method of measuring the emission intensity is the same as that in the case shown in ~~the part (a) of~~ FIG. 24(a).--

Please replace the paragraph beginning on page 11, line 16 and ending on page 11, line 20 with the following amended paragraph:

--As shown in ~~the part (a) of~~ FIG. 26(a), by providing the infrared ray reflection plate 280, infrared rays are

emitted intensely only on one side of the infrared ray lamp, with the positive direction of the x axis used as the center.--

Please replace the paragraph beginning on page 12, line 12 and ending on page 12, line 24 with the following amended paragraph:

--Furthermore, the emission intensity distribution obtained by providing the semi-cylindrical infrared ray reflection plate for the infrared ray lamp having the above-mentioned isotropic emission intensity distributions in all directions is substantially the same in a wide range on one side in general as shown in ~~the part (a) of~~ FIG. 26(a). For this reason, in the conventional infrared ray lamp, an attempt to increase the emission intensity in a more limited range and to decrease the intensity in other ranges in order to enhance directivity is difficult. As a result, in the case when the conventional heating apparatus is used for localized heating, the problem of low heating efficiency occurs.--

Please replace the paragraph beginning on page 21, line 19 and ending on page 21, line 22 with the following amended paragraph:

--~~part (a) of~~ FIG. 9(a) is a plan view showing an infrared ray lamp in accordance with a third embodiment of the present invention, and ~~part (b) of~~ FIG. 9(b) is a front

view thereof;--

Please replace the paragraph beginning on page 21, line 26 and ending on page 22, line 5 with the following amended paragraph:

--~~part (a) of~~ FIG. 11(a) is a graph showing the distribution curve of the intensity of the infrared rays emitted from the heating element of the third embodiment, and ~~part (b) of~~ FIG. 11(b) shows the cross section of the central portion of the infrared ray lamp of the third embodiment;--

Please replace the paragraph beginning on page 22, line 6 and ending on page 22, line 9 with the following amended paragraph:

--~~part (a) of~~ FIG. 12(a) is a plan view showing an infrared ray lamp in accordance with a fourth embodiment of the present invention, and ~~part (b) of~~ FIG. 12(b) is a front view thereof;--

Please replace the paragraph beginning on page 22, line 13 and ending on page 22, line 18 with the following amended paragraph:

--~~part (a) of~~ FIG. 14(a) is a graph showing the distribution curve of the intensity of the infrared rays emitted from the infrared ray lamp of the fourth embodiment, and ~~part (b) of~~ FIG. 14(b) shows the cross section of the central portion of the infrared ray lamp of

the fourth embodiment;--

Please replace the paragraph beginning on page 22, line 19 and ending on page 22, line 22 with the following amended paragraph:

--~~part (a) of~~FIG. 15(a) is a plan view showing an infrared ray lamp in accordance with a fifth embodiment of the present invention, and ~~part (b) of~~FIG. 15(b) is a front view thereof;--

Please replace the paragraph beginning on page 22, line 26 and ending on page 23, line 5 with the following amended paragraph:

--~~part (a) of~~FIG. 17(a) is a graph showing the distribution curve of the intensity of the infrared rays emitted from the infrared ray lamp of the fifth embodiment, and ~~part (b) of~~FIG. 17(b) shows the cross section of the central portion of the infrared ray lamp of the fifth embodiment;--

Please replace the paragraph beginning on page 23, line 16 and ending on page 23, line 18 with the following amended paragraph:

--~~FIG. 20~~FIGS. 20(a) and 20(b) is a partial view showing the structure of the lead wire taking-out portion of a conventional infrared ray lamp;--

Please replace the paragraph beginning on page 24, line 1 and ending on page 24, line 6 with the

following amended paragraph:

--~~part (a) of~~ FIG. 24(a) is a graph showing the distribution curve of the intensity of the infrared rays emitted from the heating element of the conventional infrared ray lamp, and ~~part (b) of~~ FIG. 24(b) shows the cross section of the central portion of the infrared ray lamp shown in FIG. 23;--

Please replace the paragraph beginning on page 24, line 11 and ending on page 24, line 16 with the following amended paragraph:

--~~part (a) of~~ FIG. 26(a) is a graph showing the distribution curve of the intensity of the infrared rays emitted from the conventional infrared ray lamp provided with an infrared ray reflection plate shown in FIG. 25, and ~~part (b) of~~ FIG. 26(b) shows the cross section of the central portion of the infrared ray lamp shown in FIG. 25.--

Please replace the paragraph beginning on page 50, line 17 and ending on page 50, line 25 with the following amended paragraph:

--~~Part (a) of~~ FIG. 9(a) is a plan view showing an infrared ray lamp in accordance with the third embodiment of the present invention, and ~~part~~ FIG. 9(b) is a front view thereof. In addition, FIG. 10 is a perspective view showing the infrared ray lamp of ~~FIG. 9~~ FIGS. 9(a) and 9(b).

However, since the central portion of the infrared ray lamp can be understood from both side portions shown in the figures, the central portion of the infrared ray lamp is not shown in either of the figures.--

Please replace the paragraph beginning on page 52, line 1 and ending on page 52, line 6 with the following amended paragraph:

--The heating element 302 in accordance with the third embodiment has a plate shape having a thickness t of 0.5 mm, a width T of 1.0 mm (=2t), 2.5 mm (=5t) or 6.0 mm (=12t) and a length of about 300 mm. However, the plate heating element 302 having a width T of 6.0 mm (=12t) is shown in FIGS. 9(a), 9(b) and 10.--

Please replace the paragraph beginning on page 55, line 15 and ending on page 56, line 6 with the following amended paragraph:

--~~Part (a) of~~ FIG. 11(a) is a graph showing the distribution curve of the intensity of the infrared rays emitted from the heating element 302 of the third embodiment. ~~Part (b) of~~ FIG. 11(b) shows the cross section of the central portion of the infrared ray lamp of the third embodiment having the heating element 302. The x and y axes shown in ~~the parts (a) and (b) of FIG. 11~~FIGS. 11(a) and 11(b) are orthogonal coordinate axes on a plane perpendicular to the axial direction of the heating element

302 shown in FIG. 10. In ~~the parts (a) and (b) of FIG. 11~~FIGS. 11(a) and 11(b), the origin 0 corresponds to the center axis of the heating element 302. In the graph of ~~the part (a) of~~ FIG. 11(a), the values in the radial directions designate the emission intensity of the infrared rays, and the values in the circumferential directions designate angles with respect to the center axis on the plane perpendicular to the axial direction of the heating element 302. These angles are designated by angles from the positive direction of the x axis.--

Please replace the paragraph beginning on page 56, line 7 and ending on page 56, line 19 with the following amended paragraph:

--The thick solid line 307a, the thin solid line 307b and the broken line 307c in ~~the part (a) of~~ FIG. 11(a) designate the intensity distribution curves in the case when the width T of the heating element 302 is 6.0 mm, 2.5 mm and 1.0 mm, respectively. Since the thickness (t) of the heating element 302 is 0.5 mm, the intensity distribution curve 307a is obtained in the case when the width T (6.0 mm) of the heating element 302 is 12t, the intensity distribution curve 307b is obtained in the case when the width T (2.5 mm) of the heating element 302 is 5t, and the intensity distribution curve 307c is obtained in the case when the width T (1.0 mm) of the heating element 302 is 2t.--

Please replace the paragraph beginning on page 56, line 23 and ending on page 57, line 11 with the following amended paragraph:

--First, a constant voltage is applied to a 600W infrared ray lamp, and infrared rays are emitted from the infrared ray lamp. In a condition wherein infrared rays are emitted from the infrared ray lamp stably, the amount of the infrared rays is measured at a position located a constant distance (about 300 mm) away from the center line (the origin 0 of ~~FIG. 11~~FIGS. 11(a) and 11(b)) of the heating element 302 in a direction perpendicular thereto. At this time, the amount of infrared rays reaching a predetermined minute area at a predetermined position is measured. This measurement is repeated while the angle with respect to the heating element 302 is changed, with the distance from the origin 0 being maintained constant. As the result of this measurement, the intensity distribution curves 307a, 307b and 307c shown in ~~the part (a) of~~ FIG. 11(a) were obtained.--

Please replace the paragraph beginning on page 57, line 12 and ending on page 57, line 21 with the following amended paragraph:

--As indicated by the intensity distribution curves 307a, 307b and 307c shown in ~~the part (a) of~~ FIG. 11(a), the directivity of the intensity of the infrared rays emitted from the heating element 302 becomes higher as the ratio of

the width T to the thickness t of the heating element 2 becomes higher. When T ≥ 5t in particular, that is, when the ratio of the width T to the thickness t is five or more, the emission intensity in the y axis direction is significantly lower than that in the x axis direction.--

Please replace the paragraph beginning on page 56, line 22 and ending on page 57, line 5 with the following amended paragraph:

--When the infrared rays are emitted unequally as described above, for example, when only a predetermined region is desired to be heated, the region should be placed on the x axis. On the contrary, when only the predetermined region is not desired to be heated, the region should be placed on the y axis. As a result, in the third embodiment, the emission intensity can have directivity, even if such a reflection plate as that used for the conventional infrared ray lamp shown in the above-mentioned FIGS. 25, 26(a) and 26(b) is not provided.--

Please replace the paragraph beginning on page 59, line 6 and ending on page 59, line 13 with the following amended paragraph:

--Because of the above-mentioned reasons, when a constant voltage is applied to the infrared ray lamp, the emission intensity of the third embodiment shown in ~~the part (a) of~~ FIG. 11(a) is about 20 to 30% higher than the emission

intensity, shown in ~~the part (a) of the above-mentioned~~ FIG. 24(a), of the conventional infrared ray lamp having the heating element 240 formed of nichrome or tungsten.--

Please replace the paragraph beginning on page59, line 14 and ending on page 59, line 17 with the following amended paragraph:

--In ~~the part (a) of~~ FIG. 11(a) and ~~the part (a) of~~ FIG. 24(a), the concentric gradations for the emission intensity indicate similar intensity values respectively.--

Please replace the paragraph beginning on page 59, line 18 and ending on page 59, line 26 with the following amended paragraph:

--However, the fact that the heating element 302 is formed of the carbon-based substance is not essential in the present invention. Even if the heating element 302 is formed of the conventional nichrome or tungsten, when the width T of the heating element 302 is larger than its thickness t by five times or more, it is possible to obtain emission intensity having such relatively high directivity as those indicated by the intensity direction curves 307a and 307b shown in ~~the part (a) of~~ FIG. 11(a).--

Please replace the paragraph beginning on page 60, line 25 and ending on page 61, line 7 with the following amended paragraph:

--~~Part (a) of~~ FIG. 12(a) is a plan view showing an infrared

ray lamp in accordance with the fourth embodiment of the present invention, and ~~part~~ FIG. 12(b) is a front view thereof. In addition, FIG. 13 is a perspective view showing the infrared ray lamp of ~~FIG. 12~~FIGS. 12(a) and 12(b). However, since the central portion of the infrared ray lamp can be understood from both side portions shown in the figures, the central portion of the infrared ray lamp is not shown in either of the figures.--

Please replace the paragraph beginning on page 61, line 8 and ending on page 61, line 11 with the following amended paragraph:

--Furthermore, in the fourth embodiment, similar components as those of the third embodiment shown in FIGS. 9(a), 9(b) and 10 are designated by the same numerals, and their explanations are omitted.--

Please replace the paragraph beginning on page 61, line 12 and ending on page 62, line 2 with the following amended paragraph:

--The infrared ray lamp of the fourth embodiment has a reflection film 301a for infrared rays in a constant range on the external face of the glass tube 301 as shown in FIGS. 12(a), 12(b) and 13, in addition to the structure of the third embodiment. The reflection film 301a is a gold thin film evaporated on the external face of the glass tube 301 so as to have a thickness of about 5μm. This reflection

film 301a reflects about 70% of the infrared rays emitted from the heating element 302. As shown in FIGS. 12(a), 12(b) and 13, the reflection film 301a is disposed between the heat-emitting blocks 303 provided on both sides, in other words, disposed at a position opposed to the light-emitting portion of the heating element 302 in the longitudinal direction thereof. This reflection film 301a has a semi-cylindrical shape, and the internal face of the reflection film 301a is disposed so as to be opposed to the wider side face 302a of the heating element 302.--

Please replace the paragraph beginning on page 62, line 3 and ending on page 62, line 23 with the following amended paragraph:

--~~Part (a) of~~ FIG. 14(a) is a graph showing the distribution curve 307d of the intensity of the infrared rays emitted from the heating element 302 of the fourth embodiment. ~~Part (b) of~~ FIG. 14(b) shows the cross section of the central portion of the infrared ray lamp of the fourth embodiment having the heating element 302. The x and y axes shown in ~~the parts (a) and (b) of FIG. 14~~FIGS. 14(a) and 14(b) are orthogonal coordinate axes on a plane perpendicular to the axial direction of the heating element 302 shown in FIG. 13. In ~~the parts (a) and (b) of FIG. 14~~FIGS. 14(a) and 14(b), the origin 0 corresponds to the center axis of the heating element 302. In ~~the parts (a) of~~ FIG. 14(a), the values in the radial directions designate

the emission intensity of the infrared rays, and the values in the circumferential directions designate angles with respect to the center axis on the plane perpendicular to the axial direction of the heating element 302. These angles are designated by angles from the positive direction of the x axis. The concentric gradations for the emission intensity in ~~the part (a) of~~ FIG. 14(a) indicate the same values of the gradations in ~~the part (a) of~~ FIG. 11(a).--

Please replace the paragraph beginning on page 63, line 2 and ending on page 63, line 10 with the following amended paragraph:

--As indicated by the intensity distribution curve 307d in ~~the part (a) of~~ FIG. 14(a), the infrared rays from the heating element 302 are emitted most intensely in the positive direction of the x axis, that is, in a direction opposite to the reflection plate 301a with respect to the heating element 302 (the right direction in ~~the part (b) of~~ FIG. 14(b)). The maximum emission intensity is about 1.5 times as high as that of the infrared ray lamp of the third embodiment.--

Please replace the paragraph beginning on page 63, line 11 and ending on page 63, line 15 with the following amended paragraph:

--On the other hand, the infrared rays from the heating element 302 are hardly emitted in the negative direction of

the x axis, that is, in the direction wherein the infrared rays are shielded by the reflection film 301a (in the left direction in ~~the part (b) of~~ FIG. 14(b)).--

Please replace the paragraph beginning on page 63, line 16 and ending on page 64, line 3 with the following amended paragraph:

--When the intensity distribution curve 307d in ~~the part (a) of~~ FIG. 14(a) is compared with the conventional intensity distribution curve 271 indicated in ~~the part (a) of~~ FIG. 26(a), the emission intensity in the conventional intensity distribution curve 271 is substantially uniform in a wide angle range near an area in the positive direction of the x axis. On the other hand, in the case of the fourth embodiment, the emission intensity gradually lowers as the distance from the x axis in the positive direction thereof increases. As a result, the emission intensity in the fourth embodiment is larger than that of the conventional example, and the range wherein the intensity becomes a maximum value in the fourth embodiment is narrower than that in the conventional example.--

Please replace the paragraph beginning on page 68, line 25 and ending on page 69, line 7 with the following amended paragraph:

--~~Part (a) of~~ FIG. 15(a) is a plan view showing an infrared ray lamp in accordance with the fifth embodiment of the

present invention, and ~~part~~ FIG. 15(b) is a front view thereof. In addition, FIG. 16 is a perspective view showing the infrared ray lamp of ~~FIG. 15~~FIGS. 15(a) and 15(b). However, since the central portion of the infrared ray lamp can be understood from both side portions shown in the figures, the central portion of the infrared ray lamp is not shown in either of the figures.--

Please replace the paragraph beginning on page 69, line 8 and ending on page 69, line 11 with the following amended paragraph:

--Furthermore, in the fifth embodiment, the same components as those of the third embodiment shown in FIGS. 9(a), 9(b) and 10 are designated by the same numerals, and their explanations are omitted.--

Please replace the paragraph beginning on page 69, line 12 and ending on page 69, line 24 with the following amended paragraph:

--The infrared ray lamp of the fifth embodiment has a reflection film 301b for infrared rays in addition to the structure of the third embodiment, just as in the case of the above-mentioned fourth embodiment. However, in the infrared ray lamp of the fifth embodiment, the reflection film 301b is formed on the external face of the glass tube 301 at a position different from that in the above-mentioned fourth embodiment. Although the reflection

film 301a of the fourth embodiment is disposed so as to be opposed to the wider side portion 2a of the heating element 302 (FIGS. 12(a), 12(b) and 13), the reflection film 301b of the fifth embodiment is disposed so as to be opposed to the narrower side portion 2b of the heating element 302.--

Please replace the paragraph beginning on page 70, line 3 and ending on page 70, line 25 with the following amended paragraph:

--~~Part (a) of~~FIG. 17(a) is a graph showing the distribution curve 307e of the intensity of the infrared rays emitted from the heating element 302 of the fifth embodiment. ~~Part (b) of~~FIG. 17(b) shows the cross section of the central portion of the infrared ray lamp of the fifth embodiment having the heating element 302. The x and y axes shown in ~~the parts (a) and (b) of FIG. 17~~FIGS. 17(a) and 17(b) are orthogonal coordinate axes on a plane perpendicular to the axial direction of the heating element 302 shown in FIG. 16. The x axis corresponds to the thickness direction of the heating element 302, and the y axis corresponds to the width direction thereof. In ~~the parts (a) and (b) of FIG. 17~~FIGS. 17(a) and 17(b), the origin 0 corresponds to the center axis of the heating element 302. In ~~the part (a) of~~FIG. 17(a), the values in the radial directions designate the emission intensity of the infrared rays, and the values in the circumferential directions designate angles with respect to the center axis

on the plane perpendicular to the axial direction of the heating element 302. These angles are designated by angles from the positive direction of the x axis. The concentric gradations for the emission intensity in ~~the part (a) of~~ FIG. 17(a) indicate the same values of the gradations in ~~the part (a) of~~ FIG. 11(a).--

Please replace the paragraph beginning on page 71, line 47 and ending on page 71, line 7 with the following amended paragraph:

--In the infrared ray lamp of the fifth embodiment, the positive direction of the y axis (the direction of the arrow of the y axis in FIGS. 16, ~~and~~ 17(a) and 17(b)) is the direction of the internal face of the reflection film 301b.--

Please replace the paragraph beginning on page 71, line 8 and ending on page 71, line 15 with the following amended paragraph:

--As shown in the intensity distribution curve 307e of the infrared ray emission in ~~the part (a) of~~ FIG. 17(a), the emission intensity of the infrared rays from the heating element 302 in the vicinity of the y axis in the positive direction thereof is lower than that in the vicinity of the x-axis direction. On the y axis side in the negative direction thereof, emission is restricted by the reflection film 301b as a matter of course.--

Please replace the paragraph beginning on page 71, line 16 and ending on page 71, line 21 with the following amended paragraph:

--When the intensity distribution curve 271 of the conventional infrared ray lamp shown in ~~the part (a) of the above-mentioned~~ FIG. 26(a) is compared with that of the fifth embodiment, the angle range in the direction wherein the emission intensity is high in the fifth embodiment is wider than that in the conventional example.--

Please replace the paragraph beginning on page 75, line 18 and ending on page 76, line 4 with the following amended paragraph:

--By installing the reflection plate 308a as described above, the directional distribution of the emission intensity of the infrared rays has substantially similar shape as that of the intensity distribution curve 307d in the fourth embodiment shown in ~~the part (a) of the above-mentioned~~ FIG. 14(a). With the above-mentioned structure, it is possible to obtain infrared rays having similar directional distribution of the emission intensity as that of the infrared ray lamp of the fourth embodiment. As a result, the heating apparatus of the sixth embodiment is suited for a use wherein an object disposed at a position opposed to the reflection face of the reflection plate 308a is heated locally for example.--

Please replace the paragraph beginning on page 76, line 5 and ending on page 76, line 17 with the following amended paragraph:

--The emission intensity of the infrared ray lamp of the third embodiment has directivity in the x-axis direction as shown in ~~FIG. 11~~FIGS. 11(a) and 11(b). For this reason, in the heating apparatus of the sixth embodiment, the emission intensity of the infrared rays by the reflection plate 308a becomes higher than that of the conventional example. In addition, in the case when the reflectivity of the reflection plate 308a is reduced considerably because of changes with time, the adherence of stains, etc., the effect on the directional distribution of the emission intensity in the sixth embodiment is less than that in the case when the conventional infrared ray lamp shown in FIG. 22 is used for example.--

Please replace the paragraph beginning on page 77, line 13 and ending on page 77, line 25 with the following amended paragraph:

--By disposing the reflection plate 308b as described above, the directional distribution of the emission intensity of infrared rays is substantially equal to that of the fifth embodiment shown in ~~the part (a) of the above-mentioned~~ FIG. 17(a). In other words, similar directional distribution of the emission intensity as that of the fifth embodiment can be obtained by using the

infrared ray lamp of the third embodiment. The heating apparatus of the seventh embodiment is thus suited for a use wherein the entire flat face of an object placed in parallel with the heating element 302 and opposed to the reflection plate 308b is heated substantially uniformly for example.--

Please replace the paragraph beginning on page 77, line 26 and ending on page 78, line 9 with the following amended paragraph:

--Furthermore, the infrared ray lamp of the third embodiment shown in FIG. 10 has directivity in emission intensity as shown in ~~FIG. 11 by itself~~ FIGS. 11(a) and 11(b). For this reason, in the heating apparatus of the seventh embodiment, in the case when the reflectivity of the reflection plate 308b is reduced considerably because of changes with time, the adherence of stains, etc., the effect on the directional distribution of the emission intensity is less than that in the case when the conventional infrared ray lamp shown in FIG. 22 is used for example.--